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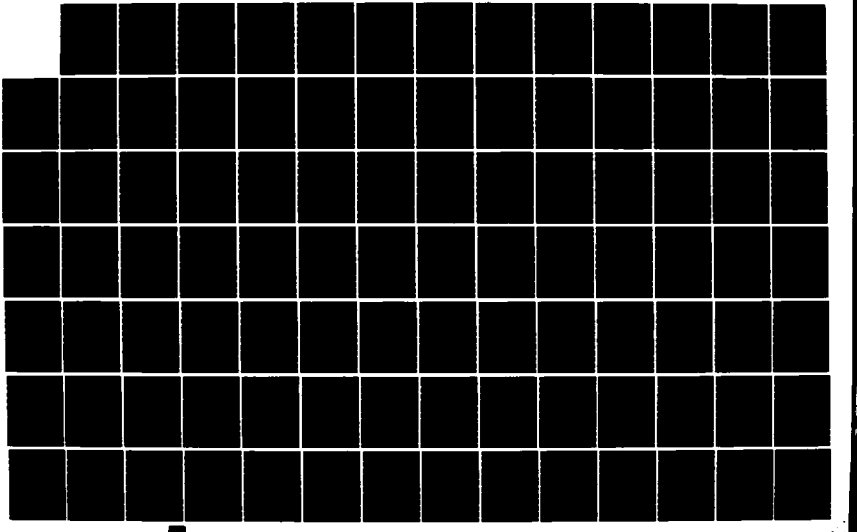

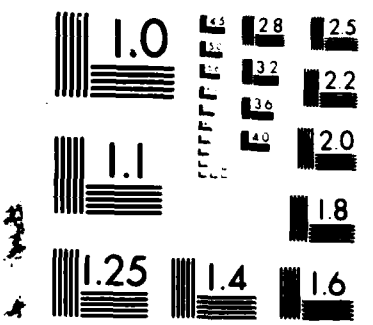

(12)

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Bethesda, Maryland 20084

COMPUTER CENTER

VAXCLUSTER LIBRARIES/DTNSRDC

(COMMANDS AND GENERAL INFORMATION)

by

DAVID V. SOMMER

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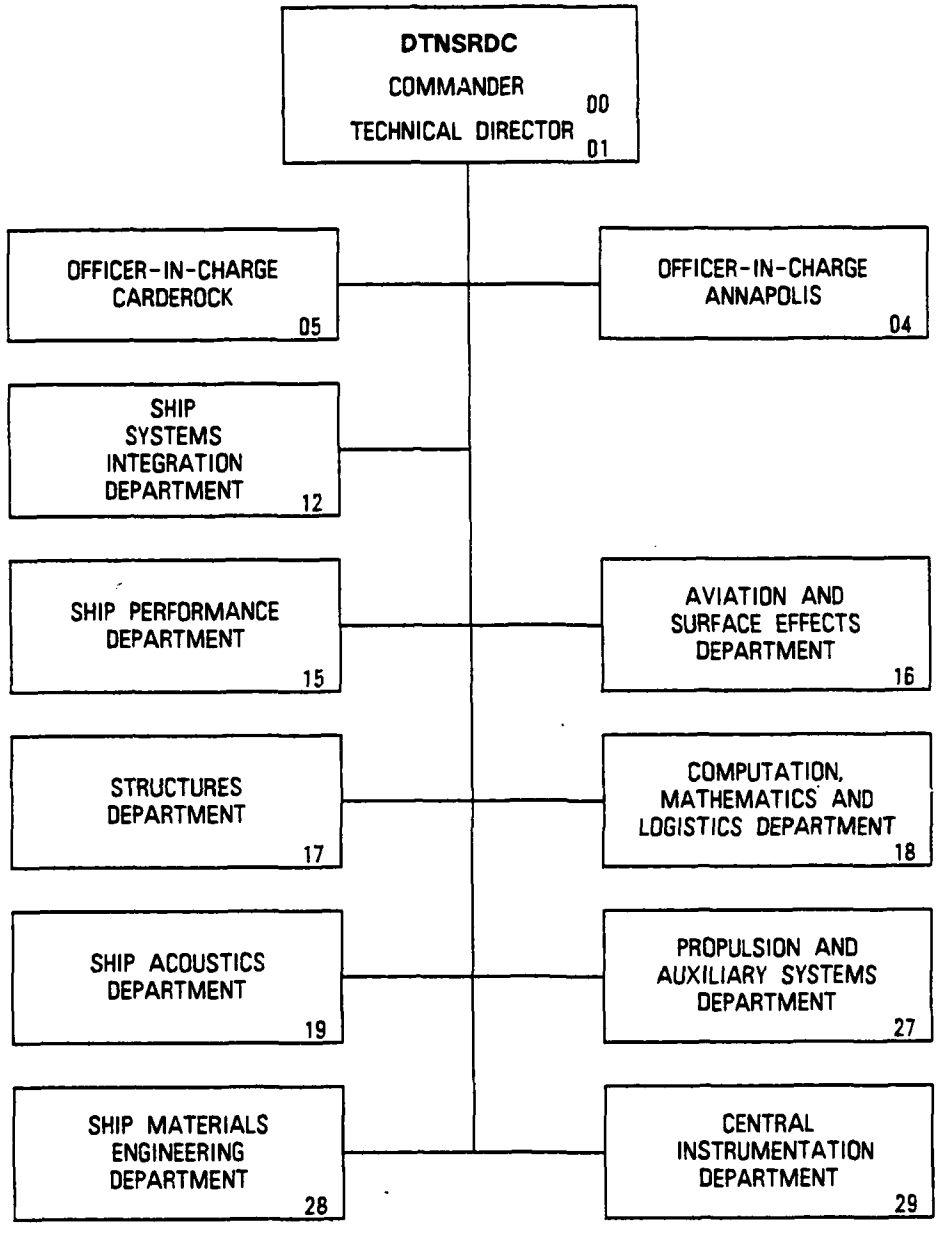
Computation, Mathematics and Logistics Department
Technical Memorandum

May 1986

TM-18-86-12

MAJOR DTNSRDC ORGANIZATIONAL COMPONENTS



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Computer commands	Functional categories	Subroutine packages
Computers	Graphics	
Control Statements	Mass Storage System	Utilities
DEC VAXcluster	Software documentation	

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The Computer Center DEC VAXcluster Libraries: DTNSRDC (Commands and General Information), VLIB/D is a reference manual which describes the local commands added to the DEC VAXcluster operating system. VLIB/D is an edited listing of the on-line helps and includes general information about the DTNSRDC implementation of VAX/VMS as well as available subprogram packages. These describe utilities to reformat files, print files, archive files on the

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20 Abstract (continued)

Mass Storage System, read/write tapes, use graphics and scientific subroutines, data base systems. VLIB/D lists the helps by functional category and alphabetically with a descriptive title for each.

****

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Computer Center DEC VAXcluster Libraries: DTNSRDC (Commands and General Info)

****

by
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Computation, Mathematics and Logistics Department
Technical Memorandum

May 1986

TM-18-86-12

Table of Contents

*** How This Was Prepared ***

This is a printed document of the on-line help modules available. There has been no attempt to "neaten" them up -- the spacing is as it was designed to be displayed by the VMS HELP program. A procedure and a program were written to extract, arrange and format them.

---

* - As new routines are developed, the HELP modules may be printed and inserted into this document.

***** Introduction *****

The Computer Center makes available on VAXcluster, in addition to the VMS operating system, a wide variety of both scientific and utility programs, subprograms and procedures. The routines are maintained in libraries or as separate files in the VSYS: directory.

The VLIB-Series consists of the following, which are the helps for the various VAXcluster "libraries" maintained by the Computer Center:

VLIB/D - Computer Center VAXcluster Libraries / DTNSRDC
(Commands and General Information) TM-18-86-12

VLIB/N - Computer Center VAXcluster Libraries / NSRDC
(Subprograms) TM-18-86-13

VLIB/P - Computer Center VAXcluster Libraries / PROCFIL
(Procedures) TM-18-86-14

VLIB/U - Computer Center VAXcluster Libraries / UTILITY
(Programs) TM-18-86-15

*** What's In This Manual ***

A list of the routines with a brief description of each is followed by the list of functional categories used to classify each routine. Next is a list of the routines under the various categories. Chapter 2 contains the currently available HELP modules in alphabetical order.

**** Contents ****

The following utility routines were written at DTNSRDC or obtained from outside sources and have been made part of the operating system. For help, type "HELP @DTNSRDC routine".

MOVIE.BYU	Graphics package for display and manipulation of mathematical models.
MSSAUDIT	Sorted audit of Mass Storage System files in a variety of formats.
MSSBACKUP	Store, fetch, delete, and list BACKUP files on the Mass Storage System.
MSSDELETE	Delete Mass Storage System files.
NASTRAN	Finite element structural analysis system.
PATRAN	Interactive graphics program for solid geometric and finite element modeling.
PLOT10	Information about the Tektronix PLOT10 plotting routines.
QPRINT	Route a file to a CDC CYBER for printing.
QSUBMIT	Submit a job to a CDC CYBER input queue.
RFTAPE	Read Foreign TAPE (copy tape-to-disk). Reads one or more files from a fixed, blocked or unblocked tape and saves them on disk.
RIM	Relational Information Management System, Version 6.0.
SMP	A Symbolic Manipulation Language (SMP).
VT100_def	Definitions of 40 control codes for VT-100-compatible terminals for use in DCL procedures.
VT100_tst	DCL code to test for a VT-100-compatible terminal for use in a procedure.
WFTAPE	Write Foreign TAPE (copy disk-to-tape). Writes one or more disk files to a fixed, blocked or unblocked tape.
XEROX	Send a file to the Xerox 8700 adding a DJDE record in front.

*** Functional Categories ***

The following functional categories are used at DTNSRDC. Those preceded by an asterisk (*) are local DTNSRDC categories. All others are from VIM (the CDC users group).

A0 Arithmetic routines
- A1 Real numbers
- A2 Complex numbers
- A3 Decimal
- A4 I/O routines

B0 Elementary functions
- B1 Trigonometric
- B2 Hyperbolic
- B3 Exponential and logarithmic
- B4 Roots and powers

C0 Polynomials and special functions
- C1 Evaluation of polynomials
- C2 Roots of polynomials
- C3 Evaluation of special functions (non-statistical)
- C4 Simultaneous non-linear algebraic equations
- C5 Simultaneous transcendental equations
- * C6 Roots of functions

D0 Operations on functions and solutions of differential equations
- D1 Numerical integration
- D2 Numerical solutions of ordinary differential equations
- D3 Numerical solutions of partial differential equations
- D4 Numerical differentiation

E0 Interpolation and approximations
- E1 Table look-up and interpolation
- E2 Curve fitting
- E3 Smoothing
- E4 Minimizing or maximizing a function

F0 Operations on matrices, vectors & simultaneous linear equations
- F1 Vector and matrix operations
- F2 Eigenvalues and eigenvectors
- F3 Determinants
- F4 Simultaneous linear equations

G0 Statistical analysis and probability
- G1 Data reduction (common statistical parameters)
- G2 Correlation and regression analysis
- G3 Sequential analysis
- G4 Analysis of variance
- G5 Time series
- G6 Special functions (includes random numbers and pdf's)
- * G7 Multivariate analysis and scale statistics
- * G8 Non-parametric methods and statistical tests
- * G9 Statistical inference

H0 Operations research techniques, simulation & management science
- H1 Linear programming
- H2 Non-linear programming
- H3 Transportation and network codes
- H4 Simulation modeling
- H5 Simulation models
- H6 Critical path programs
- H8 Auxiliary programs
- H9 Combined

I0 Input
- I1 Binary
- I2 Octal
- I3 Decimal
- I4 BCD (Hollerith)
- I9 Composite

J0 Output
- J1 Binary
- J2 Octal
- J3 Decimal
- J4 BCD (Hollerith)
- J5 Plotting
- J7 Analog
- J9 Composite

K0 Internal information transfer
- K1 External-to-external
- K2 Internal-to-internal (relocation)
- K3 Disk
- K4 Tape
- K5 Direct data devices

L0 Executive routines
- L1 Assembly
- L2 Compiling
- L3 Monitoring
- L4 Preprocessing
- L5 Disassembly and derelativizing
- L6 Relativizing
- L7 Computer language translators

M0 Data handling
- M1 Sorting
- M2 Conversion and/or scaling
- M3 Merging
- M4 Character manipulation
- M5 Searching, seeking, locating
- M6 Report generators
- M9 Composite

N0 Debugging
- N1 Tracing and trapping
- N2 Dumping
- N3 Memory verification and searching
- N4 Breakpoint printing

O0 Simulation of computers and data processors (interpreters)
- O1 Off-line equipment (listers, reproducers, etc.)
- O3 Computers
- O4 Pseudo-computers
- O5 Software simulation of peripherals
- O9 Composite

P0 Diagnostics (hardware malfunction)

Q0 Service or housekeeping, programming aids
- Q1 Clear/reset
- Q2 Checksum accumulation and correction
- Q3 File manipulation
- Q4 Internal housekeeping, save, restore, etc.
- Q5 Report generator subroutines
- Q6 Program documentation: flow charts, document standardization
- Q7 Program library utilities

R0 Logic and symbolic
- R1 Formal logic
- R2 Symbol manipulation
- R3 List and string processing
- R4 Text editing

S0 Information retrieval

T0 Applications and application-oriented programs
- T1 Physics (including nuclear)
- T2 Chemistry
- T3 Other physical sciences (geology, astronomy, etc.)
- T4 Engineering
- T5 Business data processing
- T6 Manufacturing (non-data) processing and process control
- T7 Mathematics and applied mathematics
- T8 Social and behavioral sciences and psychology
- T9 Biological sciences
- T10 Regional sciences (geography, urban planning)
- T11 Computer assisted instruction

U0 Linguistics and languages

V0 General purpose utility subroutines
- V1 Random number generators
- V2 Combinatorial generators: permutations, combinations & subsets
- * V3 standard and special problems

X0 Data reduction
- X1 Re-formatting, decommutation, error diagnosis
- X2 Editing
- X3 Calibration
- X4 Evaluation
- X5 Analysis (time-series analysis)
- X6 Simulation (generate test data for data reduction system)

Y0 Installation modification
- Y1 Installation modification library
- Y2 NEWPL tape of installation modifications

Z0 All others

**** By Functional Category ****
(11-JUN-86 @ 11:31:28)

The modules in this library are listed below by functional category.

(E - executable program; F - function subprogram; P - procedure;
S - subroutine subprogram; Z - miscellaneous)

A0 Arithmetic routines
Z-IMSL

C0 Polynomials and special functions
Z-IMSL

D0 Operations on functions and solutions of differential equations
Z-IMSL

E0 Interpolation and approximations
Z-IMSL

F0 Operations on matrices, vectors & simultaneous linear equations
Z-IMSL

F2 Eigenvalues and eigenvectors
S-EISPACK

G0 Statistical analysis and probability
Z-IMSL

H0 Operations research techniques, simulation & management science
Z-IMSL

I0 Input
Z-IMSL

J0 Output
Z-IMSL

J5 Plotting
Z-CALCFN Z-CALCOMP Z-DISSPLA Z-MOVIE.BYU Z-PATRAN
Z-PLOT10

K1 External-to-external
E-HFT Z-KERMIT P-MSSBACKUP Z-QPRINT Z-QSUBMIT
P-RFTAPE P-WFTAPE

K2 Internal-to-internal (relocation)
Z-IMSL

K3 Disk
P-RFTAPE P-WFTAPE

K4 Tape
P-RFTAPE P-WFTAPE

L0 Executive routines

Z-QPRINT Z-QSUBMIT

L2 Compiling
P-FLR

M4 Character manipulation
E-DETAB

O1 Off-line equipment (listers, reproducers, etc.)

E-AUX	E-AUXPRINT	P-XEROX	E-XEROX1	P-XEROXC
E-XEROXC1	P-XEROXCD	E-XEROXCD1	P-XEROXD	E-XEROXD1

Q0 Service or housekeeping, programming aids
P-MSSAUDIT P-MSSDELETE

R2 Symbol manipulation
Z-SMP

S0 Information retrieval
Z-RIM

T4 Engineering
Z-NASTRAN

T7 Mathematics and applied mathematics
Z-MOVIE.BYU Z-PATRAN

Z0 All others

E-DECALC	Z-FUNCAT	E-GRIPE	P-LOCK	Z-LOGIN.COM
Z-VT100_def	Z-VT100_tst			

***** Individual Documents *****

This chapter contains the HELP modules for all routines and general information in "library" DTNSRDC.

For the most recent on-line HELPs, type

HELP @DTNSRDC <routine>

To see the current contents, type

HELP @DTNSRDC Contents

To see the most recently changed routines of HELPs, type

HELP @DTNSRDC By_Date

To see the current functional category list of the modules, type

HELP @DTNSRDC By_Category

**** AUX ****

Turn an auxiliary printer (one attached to an interactive terminal) on or off.

Format:

```
AUX ON          <-- turn printer on
AUX OFF         <-- turn printer off
```

If the parameter is omitted, you will be prompted for it.

*** Admin_info ***

Language: VAX/VMS Fortran 77

Authors: Stan Willner - DTNSRDC Code 1892.1
David V. Sommer - DTNSRDC Code 1892.2

Date written: .

Dates revised

**** AUXPRINT ****

List a file on an auxiliary printer (one attached to an interactive terminal).

```
  Format:                                          !     Defaults

     AUXPRINT  file-spec  [ /[NO]CC      ]         !     /NOCC
                          [ /[NO]HEADER  ]         !     /NOHEADER
                          [ /LENGTH=l    ]         !     /LENGTH=66
                          [ /SKIP=s      ]         !     /SKIP=0;
                                                   !     /SKIP ==> /SKIP=10
                          [ /WIDTH=w     ]         !     /WIDTH=80;
                                                   !     /WIDTH ==> /WIDTH=132
```

*** Parameter ***

file-spec

Specifies the name of the file to be printed.

If omitted, you will be prompted for it.

The default extender is .DAT; the default filename FOR002.

*** Qualifiers ***

The qualifiers may follow the command name or the file-spec. If a qualifier is specified more than once, only the final value is retained.

/CC

/CC
/NOCC

Specifies whether the file has carriage control in column 1 of each line.

Default: /NOCC (that is, the file does not have carriage control in column 1)

/HEADER

/HEADER

/NOHEADER

Determines whether the listing will have a heading giving the date and file-spec.

Default: /NOHEADER

/LENGTH

/LENGTH=page_length

Specify the maximum number of lines per page of fanfold paper.

This has meaning only if /CC is also specified. Each time a top-of-page is encountered ('1' in column 1), the current page will be extended with blank lines to page_length. The result is that each line with top-of-page will be printed on the top of a new page.

Default: /LENGTH=66

/SKIP

/SKIP=lines_to_skip

Determines the number of lines to skip (after the header, if requested) before beginning to print.

Default: /SKIP=0
/SKIP implies /SKIP=10

/WIDTH

/WIDTH=page_width

Specify the terminal width. This is the same as in the SET TERMINAL command.

Default: /WIDTH=80
/WIDTH implies /WIDTH=132

*** Admin_info ***

Language: VAX/VMS Fortran 77

Authors: Dan Allen - DTNSRDC Code 189.2
David V. Sommer - DTNSRDC Code 1892.2

Date written: 10/81 (da)

Dates revised
03/14/85 - dvs - add qualifiers /CC /HEADER /LENGTH /SKIP
10/22/85 - dvs - shorten /CC output by 1 line
systems - change default to /NOHEADER
03/07/86 - dvs - add /WIDTH qualifier
- fix /CC processing when first top-of-page is not first record

**** CALCFN ****

Calcomp Plotters

The Calcomp Extended Host Computer Basic Software (EHCBS) package for off-line plotters on the DEC VAX-11 computer includes the following Host Computer Resident Functional Software:

GENERAL DRAFTING BUSINESS SCIENTIFIC CRVPT

*** General ***

The General Category includes the following FORTRAN 77 routines:

CIRCLE - Draws a circle or spiral.

DASHL - Draws dashed lines connecting a series of data points.

DASHP - Draws a dashed line to a specified point.

ELIPS - Draws an ellipse or elliptical arc.

FIT - Draws a curve through three points.

GRID - Draws a linear grid.

POLY - Draws an equilateral polygon.

RECT - Draws a rectangle.

Manual: Calcomp GRAPHICS FUNCTIONAL SOFTWARE User's Manual
FORTRAN/GENERAL

** CIRCL **

GENERAL:

CIRCL is a FORTRAN subroutine that draws an arc which may be extended to form a circle or spiral. This arc is started at the given point (XPAGE,YPAGE).

CALLING SEQUENCE:

CALL CIRCL (xpage, ypage, tho, thf, ro, rf, di)

xpage,ypage	are the coordinates, in inches (centimeters), of the arc's starting points.
tho	is the radius angle, in degrees (counterclockwise), from the X-axis, for the start of the arc.
thf	is the radius angle, in degrees (counterclockwise), from the X-axis, for the end of the arc.
ro	is the arc's starting radius, in inches (centimeters), measured from XPAGE, YPAGE.
fr	is the arc's ending radius, in inches (centimeters), measured from XPAGE, YPAGE.
di	is a code used to specify the type of line desired: DI= 0.0, a solid arc is drawn DI= 0.5, a dashed arc is drawn

** DASHL **

GENERAL:

DASHL is a FORTRAN 77 subroutine which draws dashed lines connecting a series of data points.

CALLING SEQUENCE:

CALL DASHL (xarray, yarray, npts, inc)

xarray	is the name of the array containing the abcissas of the data points to be plotted.
yarray	is the name of the array containing the ordinates of the data points to be plotted.
npts	is the quantity of data points to be plotted.
inc	is the increment between array elements. INC is greater than 1 if the values to be plotted are in a mixed or multi-dimensioned array. (Normally, INC=1)

** DASHP **

GENERAL:

DASHP is a FORTRAN 77 suboutine which draws a dashed line from the pen's present position to the specified point (XPAGE,YPAGE).

CALLING SEQENCE:

CALL DASHP (xpage, ypage, dash)

xpage,ypage are the coordinates, in inches (centimeters), of the point to which the dashed line is to be drawn.

dash is the length, in inches (centimeters), of each dash and of the space between dashes.

** ELIPS **

GENERAL:

ELIPS is a FORTRAN 77 subroutine which draws an ellipse or elliptical arc.

CALLING SEQUENCE:

CALL ELIPS (xpage, ypage, rmaj, rmin, angle, tho, thf, ipen)

xpage,ypage are the coordinates, in inches (centimeters), of the starting point of the ellipse or arc.

rmaj,rmin are the lengths, in inches (centimeters), of the semimajor and semiminor axes, respectively.

angle is the angle of the major axis, in degrees (counterclockwise) from the X-axis.

tho,thf are the angles, in degrees (counterclockwise) from the X-axis with respect to ANGLE, of the arc's starting and ending points.

ipen is the pen code used moving to the arc's starting point: IPEN=3, up for the move

IPEN=2, down for the move

*** Business ***

The Business Package contains the following FORTRAN 77 subroutines:

AXISB - draws an axis with business oriented annotation.

AXISC - draws an axis with calender month annotation.

BAR - draws bars for bar graph plotting.

LBAXIS - draws a logarithmic axis with business annotation.

SCALG - performs scaling for logarithmic plotting.

SHADE - draws shading between designated lines.
Manual: Calcomp GRAPHICS FUNCTIONAL SOFTWARE User's Manual
FORTRAN/BUSINESS

*** CRVPT ***

CRVPT is a FORTRAN 77 subroutine which fits a poynomial curve to a set of data points. The fitted curve and data are then plotted, along with reference axes and the equation of the curve.

CALLING SEQUENCE:

CALL CRVPT (xarray, yarray, inteq, npts, inc, sh, sw, ibcdt, nchar, ibcdx, ncharx, ibcdy, nchary, int)

Manual: Calcomp GRAPHICS FUNCTIONAL SOFTWARE User's Manual
FORTRAN/CRVPT

*** Drafting ***

The Drafting Package includes the following FORTRAN 77 subroutines:

AROHD - draws arrowheads.

ARROW - draws lines terminated with an arrow.

CNTRL - draws center lines.

DIMEN - draws annotated dimension lines.

LABEL - draws annotation between specified points.

Manual: Calcomp GRAPHICS FUNCTIONAL SOFTWARE User's Manual

FORTRAN/DRAFTING

*** Scientific ***

The Scientific Package includes the following FORTRAN 77 subroutines:

CURVX - plots a function of X over a given range.

CURVY - plots a function of Y over a given range.

FLINE - draws a smooth curve through a set of data points.

LGAXS - draws a logarithmic axis with annotation.

LGLIN - plots data either in log-log or in semi-log mode.

POLAR - plots data points, using polar coordinates.

SCALG - performs scaling for logarithmic plotting.

SMOOT - draws a smooth curve through sequential data points.

Manual: Calcomp GRAPHICS FUNCTIONAL SOFTWARE User's Manual
FORTRAN/SCIENTIFIC

*** Usage ***

The EHCBS Package is in file VSYS:CALCFN.OLB and must be linked to your object program along with basic library:

```
LINK myprog,VSYS:CALCFN/LIBRARY,VSYS:CALC1051/LIBRARY <-- links myprog.OBJ
RUN  myprog                                           <-- runs myprog.EXE
```

This will produce a file called CALCOMPOUT.DAT in your directory.

Use procedure CALCD2T to write a 9-track tape for the Calcomp Model 1051 plotter. The off-line work request must specify 1051 native mode.

@VSYS:CALCD2T

**** CALCOMP ****

Calcomp Plotters

The Calcomp Host Computer Basic Software (HCBS) package for off-line plotters on the DEC VAX-11 computer includes the following FORTRAN 77 routines:

PLOTS	Initialize plot subroutine; set output device.
PLOT	Convert pen movement specifications from inches to actual plotter commands.
AXIS	Draws an axis line with scale annotations and titles.
FACTOR	Enlarge or reduce plot size.
LINE	Plots a sets of data points defined by x and y coordinates arrays.
NEWPEN	Select a new pen.
NEWPLT	Control starting position of each plot.
NUMBER	Plots the decimal equivalent of an internal floating point number.
SCALE	Examine a data array to determine starting and scale value and convert from inches to actual plotter command.
SYMBOL	Draw any sequence of alphameric character.
WHERE	Returns current pen location.

Except for subroutines SYMBOL and AXIS, the calling sequences are as described in "Programming Calcomp Pen Plotters" manual.

*** Usage ***

The first call must be

CALL PLOTS (ibuff, nloc, ldev)

ibuff is ignored and may be 0.

nloc is ignored and may be 0.

ldev is the logical output device number not used elsewhere in the program and is assigned internally to disk file CALCOMPOUT.

The last call must be

```
CALL PLOT (x, y, 999)
```

to close the file.

The HCBS Package is in file VSYS:CALC1051.OLB (for the Aerodynamics Laboratory, the file is VSYS:CALC1055.OLB) and must be linked to your object program:

```
LINK myprog,VSYS:CALC1051/LIBRARY    <-- links myprog.OBJ
RUN  myprog                          <-- runs myprog.EXE
```

Use procedure CALCD2T to write a 9-track tape for the Calcomp Model 1051 plotter. The off-line work request must specify 1051 native mode.

*** Differences ***

HCBS Package is FORTRAN 77. The following subroutines differ from FORTRAN IV:

SYMBOL subroutine - now requires 7 arguments

```
CALL SYMBOL (xpage, ypage, height, ibcd, inteq, angle, nchar)
```

In FORTRAN IV, the fourth argument was either IBCD (a Hollerith string) or INTEQ (an integer).

In FORTRAN 77, character data is used. Therefore, IBCD (a character variable or constant) and INTEQ (an integer) are separate arguments. Both are required. If you are using IBCD, then set INTEQ to 0; if you are using INTEQ, set IBCD to ' '.

AXIS subroutine

```
CALL AXIS (xpage, ypage, ibcd, nchar, axlen, angle, firstv, deltav)
```

IBCD must be a character variable or constant.

Remember, character data is enclosed in '...'. Hollerith data ("...") is no longer allowed.

**** CYBER ****

Transfer files between the VAXcluster and CDC CYBER 176 or 750.

This command was disabled on 21 January 1986, at which time it was replaced by the HFT command.

For information, type HELP HFT.

**** DECalc ****

VAX DECalc is an easy-to-use calculator program designed by Digital Equipment Corporation.

Format:

DECALC

DECALC has an extensive on-line help facility accessed via the PF2 key.

*** Features ***

1. Grid size = 256 x 64 cells.
2. Null values must be entered if used in formulas. They can be blank if used in a SUM function.
3. Currency is always written with the cents noted.
4. Blocks of data cannot be moved around the spreadsheet. Data can be moved only by entire row or entire column.
5. Files cannot be merged within DECALC.
6. Ranges of data cannot be specified.
7. Exponentiation = ^.
8. No sorting ability.
9. No searching ability.
10. Stored commands can be used, but are stored in a VMS command file.
11. Personalized menus cannot be used.
12. Operating system commands can be given while in DECALC, including reading mail, directory listings editing files, etc.
13. Can access graphics if DECGRAPH is installed. We do not have this ability.
14. No database ability available, however, DATATRIEVE can be accessed.
15. Labels are automatically truncated if they carry over to other cells. continuous labels must be specified.
16. Cannot import ASCII data (print f.les).
17. Cannot place footers, headers or specialized printing mechanisms. Can select page width, only if the spreadsheet to a file.

18. Screen width 80 or 132 characters.

19. Cells or ranges of cells can be protected.

20. Can move between windows with the command \WC.

21. Cannot automatically fill cells with numeric data.

22. Cannot choose the order in which the recalculation process takes place.

23. Stationary titles allowed.

24. Windowing allowed.

25. Cannot have ranges of data available for use with other spreadsheets or other functions.

**** DETAB ****

Remove tabs from a file or convert tab-format Fortran source lines to fixed-format.

Format:

```
DETAB  in_file_spec  out_file_spec
       /TABS=<tab_list> /INCREMENT=<inc>
       /FORTRAN
```

This is useful for:

1) preparing files to go to the Xerox 8700 or Microfiche, which don't recognize the tab character.

2) removing tabs in Fortran programs (for sending to another computer which doesn't recognize the tab-format).

3) changing the tab values while removing them (e.g., changing from every 8 columns, which is the VAX/VMS standard, to every 5 columns).

*** Parameters ***

```
DETAB  in_file_spec  out_file_spec
       /TABS=<tab_list> /INCREMENT=<inc> /FORTRAN
```

in_file_spec - the input file containing tabs

out_file_spec - the output file with any tabs removed
(Default: next version of in_file_spec)

*** Qualifiers ***

/TABS

/TABS=n - set one tab at column n

/TABS=(n1,n2,...,nn) - set tabs at these columns

If /INCREMENT=inc is not specified, then the tabs following the last defined tab stop, are each converted to a single blank.

If /INCREMENT=inc is specified, then the tabs following the last defined tab stop will be every inc columns after the last defined tab stop.

(Defaults: /TABS=0 /INCREMENT=8 /NOFORTRAN)

Note: /FORTRAN overrides /TABS and /INCREMENT.

/INCREMENT

/INCREMENT=inc - Tabs are set every <inc> columns.

If both /TABS and /INCREMENT are specified, tabs are set at the column(s) specified by /TABS= and every <inc> columns after that.

(Defaults: /TABS=0 /INCREMENT=8 /NOFORTRAN)

Note: /FORTRAN overrides /TABS and /INCREMENT.

/FORTRAN

/FORTRAN - Tab-format lines are converted to fixed-format. (The first tab is set at column 7 (or 6 for continuation lines) and remaining tabs are converted to three blanks.)

Since tabs are collapsed to three blanks, it is unlikely that a DETABbed line will exceed 72 characters. If any lines do, you will be told how many and the length of the longest line.

/NOFORTRAN - No reformatting is done.

(Defaults: /TABS=0 /INCREMENT=8 /NOFORTRAN)

Note: /FORTRAN overrides /TABS and /INCREMENT.

/LOG

/LOG - List summary information and any warning messages.

/NOLOG - No messages are generated.

(Default: /NOLOG)

*** Admin_info ***

Language: VAX/VMS Fortran 77

Authors: David V. Sommer - DTNSRDC Code 1892.2
Sharon E. Good - DTNSRDC Code 1892.1

Date written: 06/21/85

Dates revised

**** DISSPLA ****

Display Integrated Software System and Plotting Language (DISSPLA)

DISSPLA is a library of FORTRAN subroutines which facilitate data plotting. It does not rely upon features particular to any type of graphic device. To link to DISSPLA libraries see:

HELP DISLINK

*** Logical_Units ***

The following Fortran logical unit numbers are internal to DISSPLA and must not be used by the calling program:

31,32,33	Scratch files
90,91,93	Mapping and Landblanking
95	META file for COMPRS or DISPOP
96	Font files
97	Scratch
10	Calcomp interface

*** Devices ***

ISSCO provides interface routines for many devices. If users have direct software for devices not mentioned here, we may be able to interface to them. Call User Services if you have any questions.

** Meta **

Calling sequence: CALL COMPRS

Creates file DISPLOT.DAT for post-processing. To alter this file name, you must also

CALL SETCPR (nn, 1, 0, 0)

OPEN file nn to give the file a specific name or VAX/VMS will default to FOROnn.DAT.

** 40xx_Tektronix **

Calling sequence:

CALL TK4014 (icps, idevc) where <icps> is the line speed at which the device is being operated in characters per second (30, 120, 240, 480, 960); and <idevc> is 1 (high resolution: 4096).

CALL TK4051 (icps)

CALL TEKALL (imodel, icps, ioptin, idevc, iadrs)

Generic interface, where <imodel> is the numeric model number (4014, 4027, 4051); and <ioptin> and <iadrs> are 0.

** 41xx_Tektronix **

Calling sequence: CALL TK4114 Specific device.

CALL TK41 (imodel)
CALL TEKALL (imodel, icps, ioptin, idevc, iarrs)

Generic interface, where <imodel> is the numeric model number (4014, 4027, 4051); and <ioptin> and <iadrs> are 0.

** Calcomp **

Calling sequence: CALL CALCMP (0, 0, 10)

Creates file CALCOMPOUT.DAT for processing to user tape with procedure VSYS:CALCD2T.

** VT240 **

Calling sequence: CALL REGIS (ioptin, idevc)

where <ioptin> is 1 (VT125), 3 (VT240), or 4 (350 PC)
<idevc> is 0 (monochrome) or 1 (color monitor).

*** Post_Processor ***

Format:

run vsys:dispop

Prompts the user for the device type, and directives. Uses the file DISPLOT.DAT created by "CALL COMPRS".

**** EISPACK ****

The EIgenSystem PACKage, from Argonne National Laboratory, is a collection of 70 subroutines to solve eigenvalue and eigenvector problems in the following classes of matrices:

- complex general
- complex Hermitian
- real general
- real symmetric
- real symmetric tridiagonal
- special real tridiagonal

The routines in this package are generally superior in speed and accuracy to similar routines in other packages.

Usage:

```
LINK <your object file>,VSYS:EISPACK/LIB
```

**** FLR ****

Compile Fortran, Link and Run.

Format:

FLR [file-name]

If file-name is omitted, you will be prompted for it.

For execution, FOR005, FOR006 and SYS$INPUT are assigned to the terminal. Thus, all Fortran READ, PRINT, READ (5,..., WRITE (6,..., TYPE, and ACCEPT statements will read from or write to the terminal.

Ignore the system message "previous value of SYS$INPUT has been superseded".

*** Admin_info ***

Author: Sharon E. Good - DTNSRDC Code 1892.2

Date written: 02/08/85

Dates revised
05/29/85

**** GRIPE ****

Allows you to make gripes or suggestions directly to the computer.

Format:

GRIPE

The gripe program will prompt you for all the information it needs.

You may prepare your gripe in advance and save it in a file. The first prompt will let you tell it the name of the file.

A gripe or suggestion may be up to 100 lines long. Each line is up to 70 characters. Longer lines are truncated with a message.

When entering the gripe from the keyboard, six special separate entries are recognized.

-	(minus sign) delete the last line entered (but no more than all lines currently in your gripe)
..	type a line of 70 dots to serve as column markers
EDT	end your gripe and use EDT to edit it
END	end your gripe
QUIT	quit the gripe program now (no gripe submitted)
REDO	redo the whole thing (start over by deleting all lines currently in your gripe)

EDT, END, QUIT and REDO may be upper or lower case but not mixed.

After you have completed the gripe by entering END (or the file with your gripe has been read), you will be asked for your name, code (or non-DTNSRDC Company name), telephone, and user initials.

If you entered your gripe from the keyboard, a copy is put into file GRIPE.LIS.

*** Admin_info ***

Language: VAX/VMS Fortran 77

Author: David V. Sommer - DTNSRDC Code 1892.2

Date written: 03/12/85

Dates revised
10/09/85 - add EDT option

**** HFT ****

HYPERchannel File Transfer between the VAXcluster and a remote host.

At present, the only remote host supported is the CDC Mass Storage System (MSS) which is available Monday through Friday from 0700-2100.

Format:

HFT option

*** Options ***

Option	Action
ACCESS	Set up user for accessing HFT routines
DEFAULT	List user's HFT Network Environment
DELETE	Delete a file from the remote host
DIRECTORY	List user's remote host files
FETCH	Transfer a remote host file to the VAXcluster
STORE	Transfer a VAXcluster file to the remote host

*** Syntax_summary ***

```
HFT  ACCESS  /ACCOUNT=account  /PASSWORD=pw  /USERNAME=username

HFT  DEFAULT

HFT  DELETE  "remote_file"

HFT  DIRECTORY  /OUTPUT=file  "remote_audit_spec"



HFT  FETCH /ASCII    /STRUCTURE  "remote"  local /BCK       /REPLACE
           /BINARY                                /CR
           /CDC                                   /FORTRAN
                                                  /NONE
                                                  /VFC
                                                  /FDL=file
```

```
HFT  STORE /ASCII  /STRUCTURE  local /DELETE  "remote"
           /BINARY
           /CDC
```

*** ACCESS ***

Provides a way for a user to define or change the default parameters for the HFT *commands.*

Format:

```
HFT  ACCESS  /ACCOUNT=account
             /PASSWORD=password
             /USERNAME=username
```

** ACCESS_Qualifiers **

/ACCOUNT

/ACCOUNT=account

Specifies the job order number under which the files are to be stored on the remote host.

If omitted, the account number for the currently executing process will be used.

/PASSWORD

/PASSWORD=password

Specifies the password required for validation on the remote host.

If omitted,you will be prompted for it.

/USERNAME

/USERNAME=remote_host_username

Specifies the remote host username required for validation on the remote host.

If omitted, the name of the user currently executing on the VAX/VMS machine is used.

*** DEFAULT ***

List your default HFT Environment.

Format:

HFT DEFAULT

*** DELETE ***

Delete the specified file from the remote host.

Format:

HFT DELETE "remote_file_spec"

** Parameter **

"remote_file_spec" - the name of the remote host file to be DELETEd and any required remote qualifiers.

The "remote_file_spec" must be specified using the syntax of the remote host. It is enclosed in quotation marks ("...") and is passed as-is to the remote host.

For example, for the MSS:

HFT DELETE "myfile"

HFT DELETE "hisfile/UN=hisid,PW=pw"
(This assumes you have delete permission)

** Related_command **

MSSDELETE may be used if you have several MSS files to delete. For information, type HELP MSSDELETE.

*** DIRECTORY ***

List of your all remote host files.

Format:

HFT DIRECTORY "remote_audit_spec"

For a sorted audit of Mass Storage System files, use the MSSAUDIT command.

** Parameter **

"remote_audit_spec" - The "remote_audit_spec" must be specified using the syntax of the remote host. It is enclosed in quotation marks ("...") and is passed as-is to the remote host.

For example, for the MSS:

```
HFT DIRECTORY "LO=F"   <-- a full audit

HFT DIRECTORY "FN=myfile,LO=F"
                       ^-- a full audit of myfile
```

** DIRECTORY_Qualifier **

/OUTPUT

/OUTPUT=[file_spec]

Controls where the output of the command is sent.

Wildcards are NOT allowed.

Defaults: filename: DIRECTORY
file type: .LIS
file_spec: SYS$OUTPUT

** Related_command **

MSSAUDIT will give you a sorted directory in a variety of formats. For information, type HELP MSSAUDIT.

*** FETCH ***

Requests a file to be transferred from the remote host to the VAXcluster.

Format:

HFT FETCH "remote_file_spec" local_file_spec

** Parameters **

"remote_file_spec" - the name of the remote host file to be FETCHed.

The remote_file must be specified using the syntax of the remote host. It is enclosed in quotation marks ("...") and is passed as-is to the remote host.

For example, for the MSS:

```
HFT  FETCH  "myfile"  my_vax_file.for

HFT  FETCH  "yourfyle/UN=yourid,PW=pw"  -
            my_vax_file
```

local_file_spec - the name of the VAX/VMS file to be created.

At least the filename must be specified.
If the device or directory is not specified, the current default device and directory are used.

Wildcards are NOT allowed.

Default file type: .DAT

Default version: the highest existing version + 1

** FETCH_qualifiers **

/ASCII

/ASCII
/NOASCII

Specifies that the remote file is an ASCII file.

See also /BINARY, /CDC.

Default: /CDC

Restriction: Only one of /ASCII, /BINARY or /CDC may be specified.

/BINARY

/BINARY
/NOBINARY

Specifies that the remote file is a copy of a VAX/VMS file.

See also /ASCII, /CDC.

Default: /CDC

Restriction: Only one of /ASCII, /BINARY or /CDC may be specified.

/CDC

/CDC
/NOCDC

Specifies that the remote file is in CDC Display Code.

See also /ASCII, /BINARY.

Default: /CDC

Restriction: Only one of /ASCII, /BINARY or /CDC may be specified.

/STRUCTURE

/STRUCTURE
/NOSTRUCTURE

Specifies how end-of-record and end-of-file marks are to be transferred.

/STRUCTURE will cause embedded and trailing end-of-record's and end-of-file's to be converted to single lines containing EOR and EOF, respectively. These provide an easy way to search thru your file. Be sure to remove any you don't want because VAX/VMS programs will not recognize them unless programmed to do so.

/NOSTRUCTURE will cause embedded and trailing end-of-record's and end-of-file's to be removed. No extra lines will be inserted into the file.

Default: /NOSTRUCTURE

** Local_fn_qualifiers **

/BCK

/BCK
/NOBCK

Specifies that the output file will have the file structure of a BACKUP file. Note that BACKUP files MUST be FETCHed with /BCK or they cannot be used.

See /CR, /FDL, /FORTRAN, /NONE, /VFC.

Default: /CR

Restriction: Use only one of /CR, /FDL, /FORTRAN, /NONE, or /VFC.

/CR

/CR
/NOCR

Specifies that the output file will be generated as a carriage return carriage control file, i.e., like a file created by the EDT editor.

See /BCK, /FDL, /FORTRAN, /NONE, /VFC.

Default: /CR

Restriction: Use only one of /CR, /FDL, /FORTRAN, /NONE, or /VFC.

/FDL

/FDL=file_spec
/NOFDL

Specifies that the file is to be generated by the File Definition Language (FDL) specified in file_spec.

Default filetype: .FDL

See /BCK, /CR, /FORTRAN, /NONE, /VFC.

Default: /CR

Restriction: Use only one of /CR, /FDL, /FORTRAN, /NONE, or /VFC.

/FORTRAN

/FORTRAN
/NOFORTRAN

Specifies that the output file will be generated as a FORTRAN carriage control file, i.e., like a file created by FORTRAN write statements.

See /BCK, /CR, /FDL, /NONE, /VFC.

Default: /CR

Restriction: Use only one of /CR, /FDL, /FORTRAN, /NONE, or /VFC.

/NONE

/NONE
/NONONE

Specified that the output file will be generated with no carriage control, such as output from RUNOFF, the VAX/VMS Text Processor.

See /BCK, /CR, /FDL, /FORTRAN, /VFC.

Default: /CR

Restriction: Use only one of /CR, /FDL, /FORTRAN, /NONE, or /VFC.

/REPLACE

/REPLACE
/NOREPLACE

Requests that, if the file to be generated already exists, it is to be replaced, i.e., the existing file is deleted. In general, when you use /REPLACE, you will want to include version numbers with the file specification.

By default, HFT FETCH creates a new version of a file. Under /NOREPLACE, when a conflict in version numbers occurs, an error is signaled.

Default: /NOREPLACE

/VFC

/VFC
/NOVFC

Specifies that the output file will be generated with variable format

with fixed control records.

See /BCK, /CR, /FDL, /FORTRAN, /NONE.

Default: /CR

Restriction: Use only one of /CR, /FDL, /FORTRAN, /NONE, or /VFC.

** Related_command **

MSSBACKUP allows you to fetch individual files previously stored using MSSBACKUP. For information, type HELP MSSBACKUP.

*** STORE ***

Requests a file to be transferred from the VAXcluster to the remote host.

Format:

HFT STORE local_file_spec "remote_file_spec"

** Parameters **

local_file_spec - the name of the VAX/VMS file to be sent to the remote host.

Wildcards are NOT allowed.

"remote_file_spec" - the name of the remote host file to be STOREd.

The remote_file_spec must be specified using the syntax of the remote host. It is enclosed in quotation marks ("...") and is passed as-is to the remote host.

For example, for remote host MFG (the DTNSRDC Mass Storage System (MSS)), use:

HFT STORE my_vax_file "myfile/CT=PU"

or, if "myfile" already exists, use:

HFT STORE my_vax_file "myfile/CT=PU,NA"

** STORE_qualifiers **

/ASCII

/ASCII
/NOASCII

Specifies that the remote file is an ASCII file.

See also /BINARY, /CDC.

Default: /CDC

Restriction: Only one of /ASCII, /BINARY or /CDC may be specified.

/BINARY

/BINARY
/NOBINARY

Specifies that the remote file is a copy of a VAX/VMS file.

See also /ASCII, /CDC.

Default: /CDC

Restriction: Only one of /ASCII, /BINARY or /CDC may be specified.

/CDC

/CDC
/NOCDC

Specifies that the remote file is in CDC Display Code.

See also /ASCII, /BINARY.

Default: /CDC

Restriction: Only one of /ASCII, /BINARY or /CDC may be specified.

/STRUCTURE

/STRUCTURE
/NOSTRUCTURE

Specifies how end-of-record and end-of-file marks are to be transfer-

red.

/STRUCTURE will cause single lines containing EOR or EOF to be converted to end-of-record's and end-of-file's.

/NOSTRUCTURE will cause single lines containing EOR or EOF to be transferred as-is.

Default: /STRUCTURE

** local_fn_qualifier **

/DELETE

/DELETE
/NODELETE

Specifies whether the VAX/VMS file is to be deleted once it has been successfully transmitted to the remote host.

Defaults: /NODELETE

** Related_command **

MSSBACKUP allows you to store several files together in a single file retaining each file's characteristics, and restore them individually. For information, type HELP MSSBACKUP.

*** Related_commands ***

The following commands are also available to support the HYPERchannel-to-MSS link:

MSSAUDIT - Sorted HFT DIRECTORY in a variety of formats.

MSSDELETE - Delete several MSS files.

MSSBACKUP - Store several files in a single file on the MSS, retaining each file's characteristics. Fetch individual files from the MSS file previously stored by MSSBACKUP.

**** IMSL ****

The International Mathematical and Statistical Libraries package, Edition 9.1, contains 517 subroutines in the following areas:

- Analysis of experimental design data
- Random numbers, generation and testing
- Statistics, basic, non-parametric, special functions
- Regression analysis
- Differential equations, interpolation, approximation, smoothing
- Linear algebraic equations
- Vector matrix arithmetic

The IMSL package is in two files:

IMSLS - the single precision version
IMSLD - the double precision version

Since the routine names are the same in single and double precision, use only one library when linking with your program. For example,

```
LINK myprog,VSYS:IMSLS/LIBRARY  ! links myprog.OBJ with single precision
                                  IMSL

RUN  myprog                     ! runs  myprog.EXE
```

**** KERMIT ****

Kermit, Version 5.0, is used to transfer files, in either direction, between the VAXcluster and a variety of personal computers. It was obtained from The University of New Orleans Computing Research Center.

Format:

KERMIT

KERMIT has an extensive on-line help facility by typing "HELP".

**** LOCK ****

Lock a terminal while remaining logged in.

Format:

LOCK

You will be prompted for a lock_password (up to 30 characters) to be entered twice.

To resume, enter <ctrl>Y. You must then enter the same lock_password. If it agrees, the terminal will be unlocked. If it does not agree, enter <ctrl>Y and the lock_password again. If, after three tries, you have not entered the correct lock_password, the terminal will be logged out.

If you do not resume before auto-logout (normally 15 minutes), you will be logged out.

*** Admin_info ***

Author: Kevin Brady - DTNSRDC Code 1892.1
David V. Sommer - DTNSRDC Code 1892.2
Stan Willner - DTNSRDC Code 1892.1

Date written: 02/27/86

Dates revised

**** LOGIN.COM_Hints ****

When you login, the system defines certain symbols and logical names. The Computer Center defines some symbols and logical names for "things" we have added to VMS.

If you have a file called LOGIN.COM in your directory, it will be executed at each login before control is turned over to you. You can use this file to define symbols or logical names, to execute commands or programs, etc.

The following are offered for possible inclusion in your LOGIN.COM file:

```
$ AUDIT == "DIRECTORY /PROTECTION /DATE /SIZE"
```

This will provide some information about your file(s). Some examples:

```
AUDIT
AUDIT [xxxx...]          <-- where xxxx is your username
AUDIT file_spec_list
```

```
$ DOWN == "@VSYS:DOWN"
$ UP   == "SET DEFAULT [-]"
```

These will move your current directory down or up. For example, if your current directory is USERDISK1:[xxxx.JONnnnnnnnnnn.MYSUB1], then "DOWN MYSUB11" will take you to USERDISK1:[xxxx.JONnnnnnnnnnn.MYSUB1.MYSUB11] and "UP" will take you to USERDISK1:[xxxx.JONnnnnnnnnnn.MYSUB1].

```
$ HOME == "SET DEFAULT SYS$LOGIN"
```

This will take you back to your home directory from any sub-directory level. For example, if your current directory is USERDISK1:[xxxx.JONnnnnnnnnnn.ABC.DEF.GHI.JKLMNO], then "HOME" will restore you to USERDISK1:[xxxx.JONnnnnnnnnnn].

```
$ LOGPR == "SHOW LOGICAL /PROCESS"
$ SYMBL == "SHOW SYMBOL /GLOBAL /ALL"
```

These are shorthand for displaying symbols and logical names.

```
$ PN == "PRINT /NOTIFY"          (1)
$ PRINT == "PRINT /NOTIFY"       (2)
```

With (1) defined, "PN file" will print the file at Central Site and notify you when it has completed printing.

If you ALWAYS want to be notified (assuming you stay logged in) when your print jobs have completed, use format (2) as this will cause the /NOTIFY qualifier to be included every time you type PRINT.

```
$ PURGALL == "PURGE [xxxx...]"
```

This will PURGE the low versions of all your files.

```
$ SITUATE == "SHOW USERS"
$ WHO     == "SHOW USERS"
```

If you are used to the CDC SITUATE command, this is the equivalent. Either will show WHO is logged in.

```
$ SQ == "SHOW QUEUE"
```

This will show what is in the various queues.

```
$ SQB  == "SHOW QUEUE DT%_BATCH"
$ SQBB == "SHOW QUEUE *BIG*"
```

These will display the jobs in the batch or big_batch queues, respectively.

```
$ SQP == "SHOW QUEUE *P*"
```

This will show what is in the print queues.

```
$ S80  == "SET TERMINAL /WIDTH=80"
$ S132 == "SET TERMINAL /WIDTH=132"
```

These will change the screen (and auxiliary printer) width to 80 or 132 columns.

```
$ TREE == "DIRECTORY [xxxx...]*.DIR"
```

This will list ALL your sub-directories.

```
$ ASSIGN USERDISKn:[xxxx.JONnnnnnnnnnn] your_name
```

You frequently need to refer to your home directory, even if it is your current directory. You might wish to let "your_name" be your first name and have similar definitions for others in your Branch or Group or Project.

```
$ ASSIGN your_name:your_help_lib_1   HLP$LIBRARY_4
$ ASSIGN your_name:your_help_lib_2   HLP$LIBRARY_5
```

These will define two of your HELP libraries so that the HELP command will automatically search them. If you use these, you should start with HLP$LIBRARY_4 because we have already defined HLP$LIBRARY

through HLP$LIBRARY_3 for everyone. If you have more HELP libraries, continue with _6, _7, etc., without a break.

We recommend that you create HELPs for each subprogram in your object library/-ies, for each program and for each procedure.

$ ASSIGN xxxx:mysublib LNK$LIBRARY

This will cause your subprogram library to be searched each time you link a program. If you want to search library NSRDC each time, use "$ ASSIGN VSYS:NSRDC LNK$LIBRARY_1" in addition to yours. If you have none, use "$ ASSIGN VSYS:NSRDC LNK$LIBRARY".

$ SHOW USERS

Each time you login, all users currently logged in will be displayed.

$ SHOW QUOTA

Each time you login, the amount of used and unused filespace is displayed.

**** MOVIE.BYU ****

MOVIE.BYU is a system of five Fortran programs (DISPLAY, UTILITY, SECTION, TITLE, and COMPOSE) that can be used for the display and manipulation of data representing mathematical models whose geometry can be described in terms of polygonal elements. An introduction and user manual for MOVIE.BYU can be found in the file

MOVIE$DIR:MOVIE.DOC

For more information about MOVIE.BYU, contact Bob Lipman, (202) 227-1660.

**** MSSAUDIT ****

Sorted audit of Mass Storage System files in a variety of formats.

Format:

MSSAUDIT audit_format output "MSS audit spec"

*** Parameters ***

p1 - audit_format - one of the following:

0 - a multi-column list of MSS file names

F - a full audit (3 lines per file)

I - an intermediate audit (1 line per file)

S - a short (narrow) audit (1 line per file)

? - display a list of the valid audit_formats

QUIT - quit the procedure immediately

If this parameter is specified, all parameters are assumed to be present (or defaulted). No prompting for parameters will occur.

If this parameter is omitted, all parameters are prompted for. To enter a default, just press the carriage return.

p2 - output - the file to contain the MSS audit listing.

(Default: SYS$OUTPUT)

p3 - "MSS audit spec" - the audit specification for the MSS.

Parameters available:

FN=MSS_file_name - to audit a single file (F, I, and S show cost)

UN=user_initials - needed only to audit

another user's files

Do NOT use the LO= parameter. This procedure determines which LO to use based on the audit_format. In fact, is you specify LO=, the procedure will terminate.

*** Examples ***

1. Get a sorted short audit of your MSS files at the terminal:

```
MSSAUDIT  S
```

2. Put a sorted full audit of your MSS files into file MSSAUDIT.LIS:

```
MSSAUDIT  F  MSSAUDIT.LIS
```

3. Display a sorted list of the MSS files owned by user xxxx:

```
MSSAUDIT  O  UN=xxxx
```

*** Admin_info ***

Authors: David V. Sommer - DTNSRDC Code 1892.2 (this procedure)
DTNSRDC Code 1892.3 (the HFT DIRECTORY command)

Date written: 01/21/86

Dates revised
01/24/86 - teach MSS_AUDIT (the formatting program) to recognize an empty catalog
02/10/86 - modify MSS_AUDIT for new MSS audit format

**** MSSBACKUP ****

Store, fetch, delete and list BACKUP files on the Mass Storage System (MSS).

Format:

MSSBACKUP option <parameters>

*** Parameters ***

```
p1 - option - DELETE - delete MSS file
              FETCH  - fetch file(s) from MSS BACKUP file
              HELP   - display a list of the available options
              LIST   - list file(s) in an MSS BACKUP file
              STORE  - store VMS file(s) in a BACKUP file on MSS
              ?      - same as HELP
```

```
DELETE - p2 - MSS file to be deleted

FETCH  - p2       - MSS file to be fetched
         p3       - comma-separated list of file(s) to be extracted
         p4 or p5 - REPLACE       to replace existing versions
                    anything else to keep    existing versions
         p5 or p4 - KEEP          to keep   the FETCHed .MSSBCK file
                    anything else to delete the FETCHed .MSSBCK file

LIST   - p2 - MSS BACKUP file to be listed
         p3 - output file to hold the list
         p4 - KEEP          to keep the FETCHed .MSSBCK file
              anything else to delete the FETCHed .MSSBCK file

STORE  - p2 - comma-separated list of files to be stored in a BACKUP file
              on MSS
         p3 - MSS file name
```

*** DELETE ***

MSSBACKUP DELETE MSS_filename

This will delete an MSS file.

*** FETCH ***

MSSBACKUP FETCH MSS_filename file_spec_list [REPLACE] [KEEP]

This will retrieve the requested files from an MSS BACKUP file. The file will be stored on VMS as MSS_filename.MSSBCK.

If REPLACE is specified, each file in file_spec_list which already exists is overwritten.

If REPLACE is not specified, existing files in file_spec_list are not overwritten.

If KEEP is specified, the FETCHed MSS_filename.MSSBCK will be kept.

If KEEP is not specified, the FETCHed MSS_filename.MSSBCK will be deleted.

The defaults are both REPLACE and KEEP omitted.

(REPLACE and KEEP may be in any combination, any other values are ignored.)

*** LIST ***

MSSBACKUP LIST MSS_filename [output_file_spec] [KEEP]

This will audit (list the contents of) an MSS BACKUP file.

If output_file_spec is omitted, the output is written to SYS$OUTPUT. Otherwise, it is written to the specified file.

If KEEP is specified, it must be the last parameter and will cause the FETCHed MSS_filename.MSSBCK to be kept.

If KEEP is not specified, the FETCHed MSS_filename.MSSBCK will be deleted.

The default is NOKEEP.

*** STORE ***

MSSBACKUP STORE file_spec_list MSS_filename

This will backup all the files in the file_spec_list, storing them on the Mass Storage System in a file named MSS_filename. If MSS_filename already exists, it will be replaced.

*** Examples ***

1) Store all your files in a BACKUP file on the MSS:

```
MSSBACKUP  STORE  *.*  VMS0121          <-- 0121 is the date
```

2) List the contents of the above BACKUP file on MSS at the terminal, keeping the .MSSBCK file for later FETCHes:

```
MSSBACKUP  LIST  VMS0121  KEEP         <-- output to SYS$OUTPUT
```

3) Fetch the files beginning with with RD (do not replace any existing versions):

```
MSSBACKUP  FETCH  VMS0121  RD*
```

4) Delete the BACKUP file from MSS:

```
MSSBACKUP  DELETE  VMS0121            <-- be sure you don't need
                                           any files in the BACKUP
                                           file because this will
                                           DELETE it FOREVER!
```

*** Admin_info ***

Authors: Stanley E. Willner - DTNSRDC Code 1892.1
David V. Sommer - DTNSRDC Code 1892.2

Date written: 01/21/86

Dates revised
05/02/86 - now checks the syntax of MSS_filename

**** MSSDELETE ****

Delete Mass Storage System files.

Format:

MSSDELETE mfn1,mfn2,...,mfnn

*** Parameter ***

p1 - comma-separated list of MSS filenames to be deleted

*** Examples ***

1. Delete MYMSS1, THISFYL, THATFYL from MSS:

MSSDELETE MYMSS1,THISFYL,THATFYL

2. Delete FILE1 from MSS:

HFT DELETE FILE1

(It's easier and faster to do he HFT DELETE directly for one file.)

*** Admin_info ***

Authors: David V. Sommer - DTNSRDC Code 1892.1 (the procedure invoked by this command)
- DTNSRDC Code 1892.3 (the HFT DELETE command)

Date written: 01/21/86

Dates revised

**** NASTRAN ****

NASTRAN is a general purpose finite element structural analysis program, capable of performing a wide range of analysis on models of complex structures. The command "NASTRAN" executes an interactive procedure that builds a batch job file. This job file can then be submitted automatically to the BIG$BATCH queue or left in the user's directory for later submission. The NASTRAN application cannot be run interactively.

For more information about the NASTRAN application, contact Myles Hurwitz, (202) 227-1938.

**** PATRAN ****

PATRAN is an interactive graphics program capable of solid geometric modeling, finite element modeling, and postprocessing of finite element analysis results. Input and output translators between PATRAN and NASTRAN, ADINA and IGES are available. PATRAN is only available on node DT2 of the VAXcluster. Translated into English, this means that you must connect to the VAXcluster via an even-numbered phone line (DT1 is addressed via the odd-numbered phone lines). Once logged in, type

@PATRAN$DIR:PATNAMES (this can be in your LOGIN.COM file)

Then, to execute PATRAN, simply type PATRAN

For more information about PATRAN, contact Bob Lipman, (202) 227-1660.

**** PLOT10 ****

TEKTRONIX Plotting

TCS (Terminal Control System) and AGII (Advanced Graphing) routines are available on VAX/VMS. No Calcomp emulation, 4662 or 4663 routines are included. To further support 4100 series raster terminals, there are ten additional routines.

*** Usage ***

Terminal type should remain 'VT100'. Do not alter to 'UNKNOWN' or Plot10 will not react properly to control characters such as Erase. [The DEC-CRT1 characteristic is set.]

The first calls are

```
CALL INITT (120)

CALL TERM  (3, 4096)
```

Character variables are not used for arguments to Plot10.

The last call is

```
CALL FINITT
```

to close the file.

The Plot10 library must be linked to your object program:

```
LINK myprog,VSYS:PLOT10/L   ! links myprog.obj
RUN  myprog                 ! runs  myprog.exe
```

*** 4100_Raster_Terminals ***

TCS special routines which enhance use of 4100 series include:

```
LINCLR (index)

BEGPNL (ix, iy, ibound)

VBGPNL (x, y, ibound)
```

```
ENDPNL

BEGPAT (ipatrn, iwide, ihigh, ibits)

RASRIT (ipxls, ilen, lbray)

RUNRIT (ilen, irun)

ENDPAT

SELPAT (ipatrn)

FILMOD (imode, ifill, ikey)
```

Eight pages describing these routines for 4100 terminal users may be requested from User Services ((202) 227-1907).

**** QPRINT ****

Route a file to a CDC CYBER for printing.

Format:

QPRINT <vaxfile> <node> /JOB=<job_extension> /TID=<terminal_id>

*** Parameters ***

QPRINT <vaxfile> <node>

<vaxfile> - file specification of the VAXcluster file containing a CDC printout

<node> - the remote node on which the file is to be printed.
One of:
MFE - the CDC CYBER 750
MFF - the CDC CYBER 176

*** Qualifiers ***

/JOB

/JOB=<job_extension>
/JOB=000

The job name (as it will appear in the CDC output queue, will be the user initials of the current login (4 characters) followed by the <job_extension> specified or implied. The <job_extension> is up to 3 characters; if fewer than three, additional '0's are added on the right. Thus, /JOB=1 is the same as /JOB=100, and, if user ZABC QPRINTs a job without /JOB, the CDC jobname will be ZABC000.

If you QPRINT several files which will reside in the CDC at the same time, use a different /JOB= to identify each.

Notes

CDC jobs may not have tabs or certain special characters; lower case will be folded into upper case. The CMP2FOR procedure may be used to remove tabs and change <FF> in column 1 to '1' before using QPRINT; the DETAB command

may be used to remove tabs. Special characters not recognized by CDC will be converted to blanks.

The file must have Fortran carriage control. The LIS2FOR command may be used to change the file attribute, if necessary.

/TID

/TID=<terminal_id>
/TID=C

Specifies where the file is to be printed.

/TID=C - print at Central Site

/TID=<terminal_id> - print at the specified terminal. '<terminal_id> is a 3-character hexadecimal number. For example, /TID=142 will print on the remote batch printer in Annapolis.

*** Examples ***

1) @VSYS:CMP2FOR myprog.lis <-- prepare compilation listing for printing

QPRINT myprog.lis MFF /JOB=xxxxABC <-- xxxx is the user initials

2) QPRINT myprog.out MFF /JOB=xxxx001 /TID=142 <-- print at remote batch printer in Annapolis

*** Admin_info ***

Author: DTNSRDC Code 1892.3

Date written: 05/ /86

Dates revised

**** QSUBMIT ****

Submit a job to a CDC CYBER input queue.

Format:

```
QSUBMIT  <vaxfile>  <node>  /JOB=<job_extension>
                            /PRINT
                            /TID=<remote_terminal_id>
```

*** Parameters ***

QSUBMIT <vaxfile> <node>

<vaxfile> - file specification of the VAXcluster file containing a CDC batch job
(Embedded end-of-records are indicated by a separate line containing only EOR in columns 1-3.)

<node> - the remote node on which the job is to run.
One of:
MFE - the CDC CYBER 750
MFF - the CDC CYBER 176

*** Qualifiers ***

/JOB

/JOB=<job_extension>
/JOB=000

The job name will NOT be taken from the job card. Instead, it will be the user initials of the current login (4 characters) followed by the <job_extension> (3 characters) specified or implied. The <job_extension> is up to 3 characters; if fewer than three, additional '0's are added on the right. Thus, /JOB=1 is the same as /JOB=100, and, if user ZABC QPRINTs a job without /JOB, the CDC jobname will be ZABC000.

If you QSUBMIT several jobs which will reside in the CDC at the same time, use a different /JOB= to identify each.

Notes

CDC jobs may not have tabs or certain special characters; lower case will be folded into upper case. The DETAB command may be used to remove tabs before using QSUBMIT. Special characters not recognized by CDC will be converted to blanks.

End-of-record marks are indicated by separate lines containing EOR.

/PRINT

/PRINT
/NOPRINT

Specifies disposition of the job output.

/PRINT - the job output will be printed on a VAXcluster printer.

Embedded end-of-records/files will be converted to separate lines of EOR or EOF.

/NOPRINT - the job output will be put into file "jobname.QFTLOG" in the directory corresponding to the user/account of the job, i.e., in the home directory [xxxx.JONnnnnnnnnnn].

Embedded end-of-records/files will be removed.

Default: /NOPRINT

/TID

/TID=<terminal_id>

Specifies where the file is to be printed.

/TID=012 - print at NAVSEA

/TID=anything_else - ignored

*** How_it_works ***

The CDC job in your VAXfile is placed in the SYS$QFT queue for transfer via the HYPERchannel to the Mass Storage System (MSS) flagged for the node you requested (MFE or MFF).

Every 5 minutes or so, the queue transfer program on MFE and MFF checks for jobs coming to it and places them into its input queue. When each job completes, the output is places on the MSS flagged for MFV (the VAX-cluster).

Every 5 minutes or so, the VAXcluster checks for output coming to it. The output is either placed into a file (jobname.QFTLOG) or printed, depending on the /PRINT qualifier.

This is the same process used when jobs are submitted on MFE or MFF to run on the other mainframe.

As on CDC, if you want the job's output to be sent somewhere else, then

```
ROUTE,OUTPUT,DC=PR,TID=<tid>,FID=*<fid>,DEF.
```

should be placed in your CDC job to cause deferred routing of the entire output file to another terminal id.

*** Examples ***

1) QSUBMIT myfile.cdcjob MFE

   submits the CDC job in myfile.cdcjob to the CDC CYBER 750 (MFE) input queue with jobname xxxx000, where xxxx are the user initials of the current login. The output will be printed on a VAXcluster printer.

2) QSUBMIT myfile.cdcjob MFF /JOB=ABC

   submits the CDC job in myfile.cdcjob to the CDC CYBER 176 (MFF) input queue with jobname xxxxABC. The output will be put into file xxxx.QFTLIS and will have Fortran carriage control.

3) QSUBMIT myprog.out MFF /JOB=xxxx001 /TID=012 <-- print at remote batch printer at NAVSEA

*** Admin_info ***

Author: DTNSRDC Code 1892.3

Date written: 05/ /86

Dates revised
   06/05/86 - correct help to show /NOPRINT as the default

**** RFTAPE ****

Read Foreign TAPE (copy tape-to-disk). Reads one or more files from a fixed, blocked or unblocked ASCII or EBCDIC tape and saves it on disk.

Format:

```
RFTAPE  slot_#  vsn  density  record_size  block_size  [ code ]
```

If no parameters are specified, you will be prompted for each. If any parameter is specified, then all (5 or 6) must be specified.

Then, for each file on the tape, You will be prompted for the file_spec to be used to store the file.

*** Parameters ***

slot_# -- is the number of the slot where the tape is stored.

vsn -- is the VSN of the tape.

density -- is the tape density (1600 or 6250).
(default: 1600)

record_size -- is the number of characters in a logical record.
(If the tape was made on a CDC CYBER using procedure C2V, this is 80 or 140.)

block_size -- is the number of characters in a physical tape record.
(If there are forty 80-character records, the block size is 3200 (40x80).)

code -- ASCII or EBCDIC
(Any word starting with 'E' is interpretted as EBCDIC; anything else is interpretted as ASCII.)
(Default: ASCII)

Then, for each file:

Filename: -- Enter the file_spec to be used to store the file.
End with CTRL-Z.

*** Admin_info ***

Language: DCL and
VAX/VMS Fortran 77

Author: Stan Willner - DTNSRDC Code 1892.1

Date written: 01/08/85

Dates revised
06/14/85
03/03/86 - add "code" parameter

**** RIM ****

Relational Information Management System, Version 7.0, developed by Boeing Computer Services Company.

Format for interactive use:

RIM

RIM has an extensive on-line help facility by typing "HELP".

For execution with a FORTRAN program, the RIM routines must be linked from the RIMLIB library.

LINK <your object file>,VSYS:RIMLIB/LIB

**** SMP ****

A Symbolic Manipulation Language (SMP).

Format:

SMP

Enter ? in SMP for Help, or call User Services at (202) 227-1907.

**** VT100_def ****

Definitions of 40 control codes for VT-100-compatible terminals for use in DCL procedures.

Usage:

Include VSYS:VT100.DEF in your procedure. Then use the defined variables in write statements to the terminal.

See also VT100_tst for statements to include to test for a VT-100-compatible terminal.

*** Admin_info ***

Author: David V. Sommer - DTNSRDC Code 1892.2

Date written: 08/21/85

Dates revised

**** VT100_tst ****

DCL code to test for a VT-100 terminal.

Usage:

Include VSYS:VT100.TST in your procedure.

See also VT100_def for definitions of VT-100 control sequences.

*** Admin_info ***

Author: David V. Sommer - DTNSRDC Code 1892.2

Date written: 08/21/85

Dates revised

**** WFTAPE ****

Write Foreign TAPE (copy disk-to-tape). Writes one or more disk files to a fixed, blocked or unblocked (ASCII or EBCDIC) tape.

Format:

WFTAPE slot_# vsn density record_size block_size [code]

If no parameters are specified, you will be prompted for each. If any parameter is specified, then all (5 or 6) must be specified.

Then, for each file on the tape, you will be prompted for the file_spec of the file to be written to tape.

*** Parameters ***

slot_# -- is the number of the slot where the tape is stored.

vsn -- is the VSN of the tape.

density -- is the tape density (1600 or 6250).
(default: 1600)

record_size -- is the number of characters in a logical record.

block_size -- is the number of characters in a physical tape record.
(E.g., if there are forty 80-character records, the block_size is 3200 (40x80).)

code -- ASCII or EBCDIC
(Any word starting with 'E' is interpreted as EBCDIC; anything else is interpreted as ASCII.)
(Default: ASCII)

Then, for each file:

Filename: -- Enter the file_spec of the file to be written onto the tape.
End with CTRL-Z.

*** Admin_info ***

Language: DCL and

VAX/VMS Fortran 77

Author: Stan Willner - DTNSRDC Code 1892.1

Date written: 01/18/85

Dates revised
06/14/85
03/03/86 - add "code" parameter

**** XEROX ****

Send a file to the Xerox 8700.

Formats:

```
XEROX  <vaxfile>  <job_extension>  <copies>  <Xerox_jobname>  -
                  <paper>  <duplex>  <forms>  <tab_list>

XEROX          <-- you will be prompted for each parameter
```

Defaults:

```
XEROX  <user_specifies>  000  1  STDLND  3-HOLE  YES  ""  "DETAB"
```

Records containing Xerox 8700 control information are generated from the XEROX parameters. The file is then copied (with tabs removed, if requested) and reblocked (140-character records) for the Xerox 8700. It will be in file

XEROX$<user_initials><job_extension>.TMP

This file will be deleted automatically after it has been sent to the Xerox 8700. Up until that time, if you decide you don't want to process the file, simply DELETE it.

See sub-topic "How_it_works" for information on how the file is processed as it is copied.

See sub-topic "Related_commands" for varieties of the XEROX command.

*** Parameters ***

file_spec - the file to be sent to the Xerox 8700.

job_extension - the name of the job being sent to the Xerox 8700 will be your User Initials followed by up to 3 additional characters (the job_extension). If fewer than 3 characters are specified, they are zero-filled on the left. Thus, if user ABCD specifies a job_extension of 12, the jobname will be ABCD012.

(default: 000)

copies - the number of copies of the file to be printed.

(range: up to 3 digits)

(default: 1)

Xerox_jobname - specifies the Xerox job to be used.

(default: STDLND)

See sub-topic Xerox_job_names for a list of the pre-defined Xerox job names.

paper - specifies whether 3-hole-punched or unpunched (plain) paper is to be used.

(default: 3-HOLE (parameter omitted or having a '3' as its first character)
anything else means plain paper)

duplex - specifies whether the Xerox output is to be printed on two sides (YES or DUPLEX) or on only one side (NO).

(default: YES (parameter omitted or having 'Y' as its first character or (some abbreviation of) the word 'DUPLEX')
anything else means NO)

forms - specifies that a special forms overlay is desired.

(default: the FORMS= parameter will be omitted)

See sub-topic Overlay_forms_available.

tab_list - specifies what the tabs are. <tab_list> may be one of the following:

NOTABS	- the file has no tabs (synonyms: any word beginning with N)
DETAB	- the file uses standard tabs (every 8 columns) (synonyms: any word beginning with D)
t1,t2,...,tn+inc	- the file has tabs at columns t1, t2, ..., tn and every inc columns thereafter
t1,t2,...,tn	- the file has tabs at columns t1, t2, ..., tn and every 8 columns thereafter
+inc	- the file has tabs every inc columns
+	- the file has tabs every 8 columns

Two fatal errors are detected: tabs not in ascending order; invalid character in list (not digit, comma or plus).

(default: DETAB)

*** Overlay_forms ***

Landscape refers to a page orientation where the printed lines are parallel to the long side of the page.

Portrait refers to a page orientation where the printed lines are parallel to the short side of the page.

2-up is a term used to denote 2 pages of standard printout appearing on one side of a page in a portrait orientation.

The following overlay forms names have been defined by the Computer Center.

Landscape:

FRAME1	box around page (1 solid line)
FRAME2	box around page (2 solid lines)
FRAME3	box around page (3 solid lines)
FRAME4	box around page (1 solid/shaded line)
2UPL1	solid line dividing two pages
2UPB1	solid boxes drawn around two pages
2UPL2	double solid lines dividing two pages

Portrait:

FRAMP1	box around page (1 solid line)
FRAMP2	box around page (2 solid lines)
FRAMP3	box around page (3 solid lines)
FRAMP4	box around page (1 solid/shaded line)

2UP3L triple solid lines dividing two pages
2UPSL single shaded line dividing two pages
2UPSB shaded bar dividing two pages
2UPB2 two separate solid line on a page

WEEKLY checklist by days

*** Xerox_job_names ***

The Xerox jobname is the name of the job on the Xerox 8700 which will be used to process the file.

Landscape refers to a page orientation where the printed lines are parallel to the long side of the page.

Portrait refers to a page orientation where the printed lines are parallel to the short side of the page.

2-up is a term used to denote 2 pages of standard printout appearing on one side of a page in a portrait orientation.

2-across is a term used to denote two portrait pages appearing on one side of a page in a landscape orientation.

The following job names have been defined by the Computer Center.

Landscape:

STDLND - standard landscape job (default),
- carriage control (CC) character plus 136 characters by 62 lines
(good for standard printouts)

LN8LND - 8 lpi landscape job
- CC character + 136 data characters by 84 lines

2ACLND - 2-across landscape job
- 2 * (CC character + 72 data characters) by 62 lines

Portrait:

STDPRT - standard portrait job
- CC character + 72 data characters by 62 lines

ST3PRT - 3rd standard portrait job
- CC character + 94 data characters by 62 lines
(very large margins)

ST4PRT - 4th standard portrait job
- CC character + 87 data characters by 62 lines
(general documentation; manuals)

DOCPRT - document/manual portrait job
- CC character + 87 data characters by 62 lines
(A '.' in column 76 of top-of-page line forces page onto front side)

VAXDOC - like ST4PRT, except each page has exactly 66 lines
(blank carriage control on all lines)

DD1473 - Standard Form DD-1473
- both sides of the form are required (each begins with a '1' in column 1)

Portrait (2-up):

2UPPRT - 2-up portrait job
- CC character + 136 data characters by 124 lines
(good for compact storage of standard printout)

2U8PRT - (8 lpi) - 2-up portrait job
- CC character + 136 data characters by 168 lines
(good for compact storage of standard printout)

2UCPRT - 2-up portrait job
- CC character + 136 data characters by 124 lines
(like 2UPPRT, but continuous output;
good for 2-page printer plots)

*** How_it_works ***

Processing of the file is determined by the file's record attribute:

- Files with "Fortran carriage control" will be assumed to have carriage control information in the first column of each line and will, therefore, be copied "as is".

- Files with "Carriage return carriage control" will be shifted one column to the right. A '1' carriage control character is added to the first record and a ' ' carriage control character is added to all other records. In addition, <FF> in column 1 is changed to '1'.

- Files with "None" (no carriage control) will be processed as those with "Carriage control carriage return". In addition, the <CR> or <CR><LF> will be removed from the end of each line. Lines ending with <CR> (overprinted lines) will be regrouped and given a '+' carriage control character.

Unless NOTABS is specified, each line will be tested for a tab character, and, if found, the line will be detabbed.

CAUTION

The generated blocked file contains 140-character records and can be 2-4 or more times the size of the original file. Be sure you have enough file storage space available to hold the blocked file until it has been sent. Use the SHOW QUOTA command. If you exceed your quota, be sure to DELETE the partially completed file XEROX$xxxxeee.TMP file. You will also have to gain more file space by deleting additional unneeded files.

*** Related_commands ***

The following 4 commands are available for Xerox 8700 processing:

XEROX - A DJDE record of Xerox 8700 control information is added at the start of the file. The file's record attribute determines how the file will be processed. Note that if the file already has a ' <DJDE>' record at the start, it will be treated as data.

XEROXD - The file is assumed to have one or more DJDE records already in it. The file's record attribute determines how the file will be processed.

XEROXC - A DJDE record of Xerox 8700 control information is added at the start of the file. The file is assumed to have Fortran carriage control in column 1 of each record and, therefore, records will not be shifted. Additional file processing is determined by the file's record attribute. Note that if the file already has a ' <DJDE>' record at the start, it will be

treated as data.

XEROXCD - The file is assumed to have one or more DJDE records already in it. The file is also assumed to have Fortran carriage control in column 1 of each record and, therefore, records will not be shifted. Additional file processing is determined by the file's record attribute.

How to choose:

		DJDE already in file? NO	YES
carriage control	use record attribute	XEROX	XEROXD
	force Fortran	XEROXC	XEROXCD

** XEROXC_ **

Send a file assumed to have Fortran carriage control to the Xerox 8700 adding control information records at the start of the file.

Formats:

```
XEROXC  <vaxfile>  <job_extension>  <copies>  <Xerox_jobname>  -
                   <paper>  <duplex>  <forms>  <tab_list>

XEROXC          <-- you will be prompted for each parameter
```

Defaults:

```
XEROXC  <user_specifies>  000  1  STDLND  3-HOLE  YES  ""  "DETAB"
```

The <vaxfile> is assumed to have Fortran carriage control characters in column 1 of each line, regardless of the file's record attribute.

Records containing Xerox 8700 control information are generated from the XEROX parameters. The file is then copied (with tabs removed, if requested) and reblocked for the Xerox 8700. It will be in file
XEROX$<user_initials><job_extension>.TMP.
This file will be deleted automatically after it has been sent to the Xerox 8700. Up until that time, if you decide you don't want to process the file, simply DELETE it.

** XEROXCD_ **

Send a file which already has DJDE information at the beginning and which is assumed to have Fortran carriage control to the Xerox 8700.

Formats:

XEROXCD <vaxfile> <job_extension> <paper> <tab_list>

XEROXCD <-- you will be prompted for each parameter

Defaults:

XEROXCD <user_specifies> 000 3-HOLE DETAB

The <vaxfile> is assumed to have Fortran carriage control characters in column 1 of each record, regardless of the file's record attribute.

The first record of the file is checked to be sure that it starts with ' <DJDE>'. If it does, the file is then copied (with tabs removed, if requested) and reblocked for the Xerox 8700. It will be in file
XEROX$<user_initials><job_extension>.TMP.
This file will be deleted automatically after it has been sent to the Xerox 8700. Up until that time, if you decide you don't want to process the file, simply DELETE it.

** XEROXD_ **

Send a file which already has DJDE information at the beginning to the Xerox 8700.

Formats:

XEROXD <vaxfile> <job_extension> <paper> <tab_list>

XEROXD <-- you will be prompted for each parameter

Defaults:

XEROXD <user_specifies> 000 3-HOLE DETAB

The first record of the file is checked to be sure that it starts with ' <DJDE>'. If it does, the file is then copied (with tabs removed, if requested) and reblocked for the Xerox 8700. It will be in file
XEROX$<user_initials><job_extension>.TMP.
This file will be deleted automatically after it has been sent to the Xerox 8700. Up until that time, if you decide you don't want to process the file, simply DELETE it.

*** Admin_info ***

Language: DCL and Fortran 77 extended

Author: David V. Sommer - DTNSRDC Code 1892.2

Date written: 05/29/86

Dates revised
06/02/86 - add parameter for detabbing

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1	189	Gray, G. R.
1	189.2	
1	189.3	Morris, J.
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1	1894	
1	1896	Glover, A.
1	1896.2	Dennis, L.
1	522	TIC (C)
1	522.2	TIC (A)
1	93	Patent Counsel

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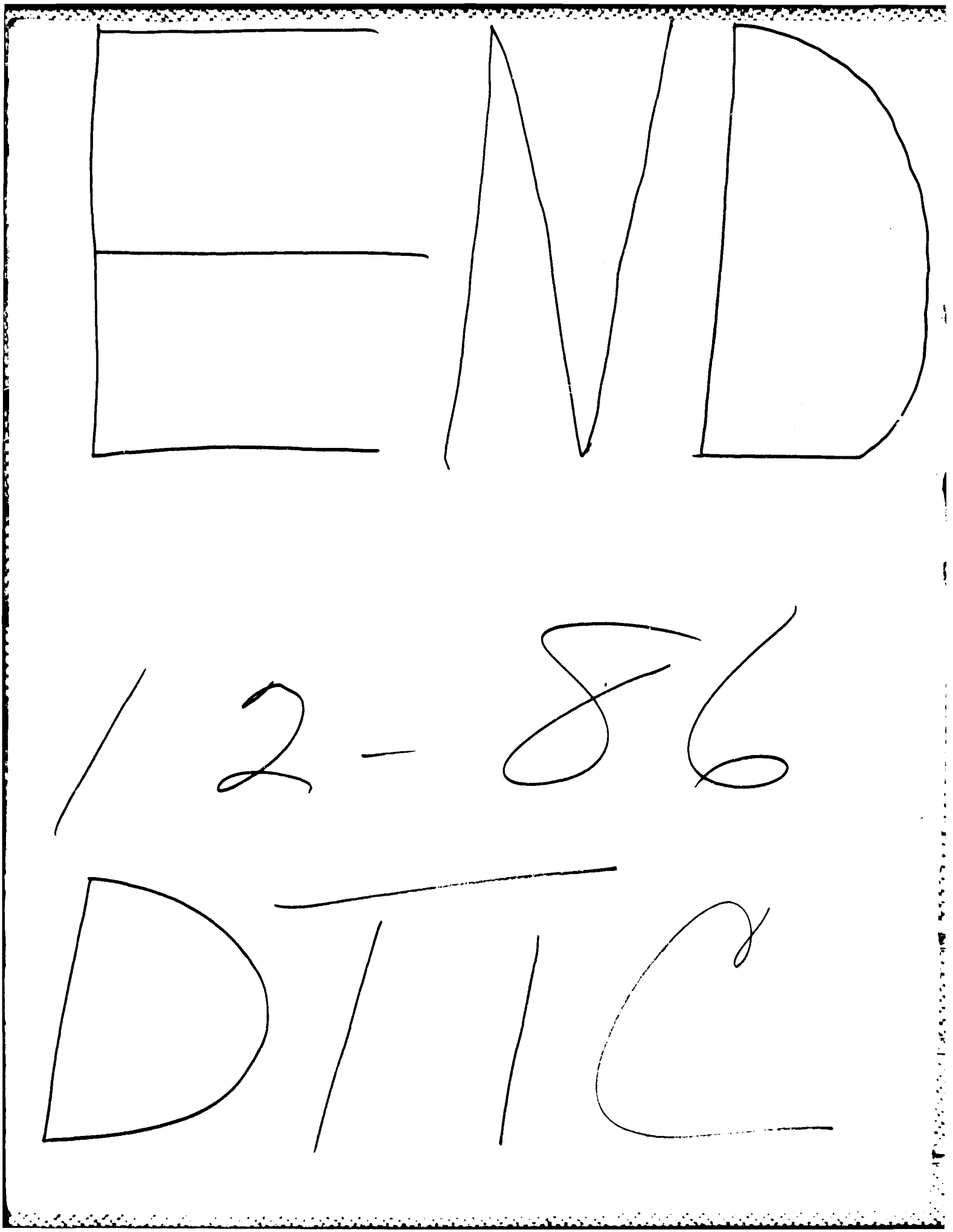
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